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ABSTRACT OF THE DISCLOSURE

A flexible thin layer open liquid state electrochemical cell which can be used as a primary or rechargeable power supply for various miniaturized and portable electrically powered devices of compact design. The cell includes a wet electrolyte, yet maintains a flexible, thin and open configuration, thus devoid of accumulation of gases upon storage. The cell comprising a first layer of insoluble negative pole, a second layer of insoluble positive pole and a third layer of aqueous electrolyte, the third layer being disposed between the first and second layers and including a deliquescent material for keeping the open cell wet at all times; an electroactive soluble material for obtaining required ionic conductivity; and, a watersoluble polymer for obtaining a required viscosity for adhering the first and second layers to the ^{third}~~first~~ layer. The electrochemical cell of the present invention is preferably produced using a suitable printing technology.